

INTERNATIONAL PHASE SUBMISSION

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Claims

1. Method for determining the actuator energy required for the different injection types of an actuator of an internal combustion engine, a control signal being applied to the actuator such that said control signal generates an actuator signal (S_1, S_2) and an injection parameter of the internal combustion engine being set such that said actuator signal is generated at a specific stored time (t_4, t_4'), characterized in that the first injection type in the combustion cycle is deactivated in order to determine the actuator energy of said type from the second injection type.
2. Method according to Claim 1, characterized in that the first injection type is reactivated in order to determine the actuator energy required for the second injection type.
3. Method according to Claim 2, characterized in that the last injection type is an advance injection and the second injection type is a main injection.
4. Method according to at least one of the above claims, characterized in that the internal combustion engine is in a stationary operating state.
5. Method according to at least one of the above claims, characterized in that the injection pressure of the injectors is changed after each control process.
6. Method according to at least one of the above claims,

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characterized in that the main injection is changed in order to generate the actuator signal.

7. Method according to at least one of the above claims, characterized in that the control signal is applied to one injector at the first point in time (t_3), and in that the actuator signal (S_1) is generated at the second point in time (t_4) after a specific time (t_4, t_3).
8. Method according to at least one of the above claims, characterized in that, in an internal combustion engine with several injectors, the difference in the two points in time (t_3, t_4) of one injector is the same as the respective difference between the two points in time of another injector.
9. Method according to at least one of the above claims, characterized in that at least one of the following variables is selected as an injection parameter: loading time of the control signal, amplitude of the control signal, control duration and actuator energy